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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/506,741 | 02/18/2000 | Victor S Lobanov | 1503.0730000 | 7797 |

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EXAMINER

CLOW, LORI A

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| ART UNIT | PAPER NUMBER |
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1631

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/506,741

Applicant(s)

LOBANOV ET AL.

Examiner

Lori A. Clow, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,7,8,10-26,31,32 and 34-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7, 8, 10-26, 31, 32, and 34-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' arguments, filed 9 March 2005, have been fully considered. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Claims 1, 2, 7, 8, 10-26, 31, 32, and 34-48 are currently pending.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 7, 8, 10-26, 31, 32, and 34-48 remain rejected under 35 U.S.C. 102(e) as being anticipated by US 6,240,374 (Cramer et al.), for the reasons set forth in the Office Action dated 9 December 2004 and re-iterated below.

Cramer et al. summarizes the disclosure in the title and abstract to be directed to virtual library creation and searching for molecules with characteristics similar to a selected molecule. In the last sentence of the abstract the searching of billions of possible product compounds is described. Of particular interest is the methodology set forth in columns 61-68 wherein a detailed description of an embodiment of the invention of Cramer et al. is set forth. In column 61, lines 4-9, a non-enumerated virtual library is generated from structural variations of any one synthetic reaction as in instant claim 1, part (a) which is then listed in files but not specifically enumerated at this stage in columns 61-64. From this library a random selection is generated as set forth in column 64, lines 40-42 to complete a step as in part (a) of instant claim 1. This selection is

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enumerated as a 0.001 fraction in column 64, lines 40-42, as also required in instant claim 1, part (b). In column 64, line 42, through column 65, line 3, a fitness function in the form of bits evaluated in the Tanimoto fingerprint is discussed wherein in column 65, lines 4-58, a subset of compounds is selected with certain Tanimoto similarities of 0.80 or higher (such as also in instant claims 7, 10-22, and 31-46), or, alternatively other such criteria values, as also required in instant claim 1, part (c). The structural core, and other structural building blocks are then defined as the core, fpcard, and fp in column 65, line 59, through column 66, line 65, as also required in instant claim 1, part (d), regarding deconvoluting the selected M compounds into separate files. The thus selected focused library is exemplified in column 67, line 57, through column 68, line 9, as a screening library which may be synthesized, which is the step (e) of instant claim 1. Similarity searches to produce such a screening or focused library is then discussed in column 68, line 10, through column 69, line 65, wherein in column 69, lines 42-65, the number of focused or screening library fingerprint structural variations that are searched are enumerated as in instant claim 1, step (f), therefore completing the anticipation of instant claims 1, 23-25, 47, and 48 recognizing the computer-based disclosure also of Cramer et al. An output of the results is inherently required in order to make such results useful. Such an output is shown in Figure 24 in the penultimate bottom box described as "WRITE OUT RESULTS FILE" as also required in instant claims 2 and 26 as an output specie type therein. The selection of compounds that can be synthesized as defined in the invention of Cramer et al. as well as in instant claims 3 and 27 is set forth as depicted in Figures 11(a) - 11(b), steps 8 - 8C therein. This outputting of results defined via similarity evaluation as noted above corresponding to instant claim 7 also anticipates instant claims 8 and 9.

Response to Applicant's Arguments

Applicant argues, at page 15, line 8, of the response dated 9 March 2005, that “nowhere does the reference [Cramer et al.] teach or suggest synthesizing a compound selected from the process”.

This is not persuasive. The entire purpose of the invention taught by Cramer et al is for the sole purpose of “the generation of a huge virtual library of potential product molecules which could be formed by combinatorial arrange of structural variations and cores (abstract)”. Cramer et al. clearly teach the application of this invention as one for improving high throughput analysis for the ultimate step of synthesis. Furthermore, Cramer et al. teach synthesis and optimization of that synthesis at column 49, lines 30-52.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

No claims are allowed.

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Inquiries

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The Central Fax Center Number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori A. Clow, Ph.D., whose telephone number is (571) 272-0715. The examiner can normally be reached on Monday-Friday from 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, Ph.D., can be reached on (571) 272-0718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

June 10, 2005
Lori A. Clow, Ph.D.
Art Unit 1631
Lori A. Clow

Ardin H. Marschel 6/12/05
ARDIN H. MARSCHEL
SUPERVISORY PATENT EXAMINER